

Mineral Identification Key

Directions: Determine the identity of your samples by comparing their properties with the descriptions listed in the key. Start at the left and work to the right while progressively narrowing the possibilities.

Name _____ Class _____ Date _____

Metallic luster

Black, green-black, or dark green streak

Yellow-brown or white streak

Black; strongly magnetic; hardness, 6	Magnetite
Lead-pencil black; smudges fingers; hardness, 1	Graphite
Brass yellow; cubic crystals; hardness, 6 to 6.5	Pyrite
Brass yellow, may be tarnished purple; hardness, 3.5 to 4	Chalcopyrite
Shiny gray; very heavy; cubic cleavage; hardness, 2.5	Galena

Yellow-brown to dark brown, may be almost black; hardness, 6	Limonite
Yellow-brown; streak white to pale yellow; resinous luster; hardness, 3.5 to 4	Sphalerite

Nonmetallic, light-colored

Scratches glass

Cleavage


Pink to bluish gray to green; 2 cleavage planes at right angles; hardness, 6	Feldspar
--	----------

No cleavage

Glassy luster; crystals are 6-sided when present; hardness, 7; shell-like fracture	Quartz
Glassy luster; shades of green and yellow; hardness, 6.5 to 7	Olivine

Does not scratch glass

Cleavage

Colorless to white; salty taste; cubic cleavage	Halite
White or yellow to colorless; hardness, 3; double image seen when crystal is placed on printed page 	Calcite
White to transparent; hardness, 2	Gypsum
Green to white; feels soapy; hardness, 1	Talc
Colorless to light yellow; hardness, 2 to 2.5	Muscovite
White, yellow, purple, or green; 8-sided cleavage; hardness, 4	Fluorite

No cleavage

Green to white; feels soapy; hardness, 1	Talc
--	------

Cleavage

Black; cleavage with 2 planes at 90° angles; hardness, 5 to 6	Augite
Black; cleavage with 2 planes at 60° angles; hardness, 5 to 6	Hornblende

Nonmetallic, dark-colored

Scratches glass

No cleavage

Gray, brown, or blue-gray; 6-sided crystals; hardness, 9	Corundum
Reddish brown; fracture resembles poor cleavage; brittle	Garnet
Red, brown, or gray; dull luster; shell-like fracture; hardness, 7	Jasper

Does not scratch glass

Cleavage

Brown to black	Biotite
Shades of green; hardness, 2 to 2.5	Chlorite

No cleavage

Red to brown streak; earthy appearance	Hematite
Green, brown, blue, or purple; poor cleavage; hardness, 5	Apatite

[illegible]